outpatient AMD3100 administration and the usual daytime leukapheresis at our center. Therefore, we received an institutional waiver from AnorMed/Genzyme for early morning administration of AMD3100 followed by leukapheresis approximately six hours later for all subsequent patients. We compare here the outcomes of the three patients with previous day (qhs) versus four patients receiving early morning (qam) administration of AMD3100. The median age, weight, # prior chemotherapy regimens, highest CD34 cells/μl achieved during most recent mobilization attempt for qhs vs qam administration were: 58 vs 48.5 years, 80 vs. 76 kg, 2 vs 3.5, and 4.13 vs. 7.21 respectively. Of note, all three patients in the qhs dosing had received prior radiation whereas none of the four patients in the qam group did. The median CD34 cells/μl 24 hours prior to the first AMD3100 dose in the two groups was 3.6 vs 4.035. For each group, the median CD34 cells/μl taken immediately prior to apheresis (averaged over the two to four days of stem cell collection) was 9.22 vs. 25.7. After a median of three days of collection in both groups, the total number of CD34 cells $*10^6$/kg collected was 2.6 for the qhs group versus 5.57 for the qam group. These results demonstrate (at least for patients without prior radiation) the feasibility of a completely daytime, outpatient peripheral blood stem cell harvest by administering AMD3100 six hours prior to leukapheresis.

108

AUTOGRAFTING IN ACUTE MYELOGENOUS LEUKEMIA: A SINGLE CENTER EXPERIENCE

Liesveld, J.L., Nichols, D., Sanapala, S., Becker, M.W., Phillips, G.L. University of Rochester, Rochester, NY

The role of autografting for AML continues to be defined, and its positioning in therapy as compared to allogeneic transplantation and chemotherapy approaches is still under investigation. Between 1989 and 2008, 87 autologous stem cell transplants have been performed at the University of Rochester Medical Center for acute myelogenous leukemia. The mean age at transplant was 39 years with a range of 2 to 67 years. All but 3 patients were Caucasian. Nine patients were < 18 years of age and 9 patients were above age 60 at the time of transplant. 51% of patients were male. 59% of patients were transplanted after marrow harvest and 41% after peripheral blood stem cell collection. Almost all were conditioned with busulfan and cyclophosphmide. At time of analysis (8/08), 67% of patients were deceased, and 33% were alive. Seven patients died before day 100; 3 of infection, two of disease recurrence, and two of unknown causes. In the remaining patients, the mean survival was 1512 ± 196 days. In those still living, the mean survival is 2451 ± 325 days (median 2693 days). Of these patients, 4 have undergone allogeneic stem cell transplantation for recurrent AML and remain in remission, and one patient received FLAG chemotherapy after a post-transplant relapse and is still disease free 11 years later. In those with relapsed disease, where date of relapse was known with precision, the time range for relapse was from 63 days to greater than 10 years. All but 4 relapses occurred prior to two years. In those patients who died of causes other than AML relapse, 8 had pulmonary disease, 2 had sepsis, 3 had fungal infections, 1 had liver failure, and 1 had later onset of ovarian cancer. In 13 cases lost to follow up, the cause of death is unknown. This single center experience demonstrates that autologous stem cell support after high dose therapy for treatment of acute myelogenous leukemia does result in long-term disease remission in about one third of cases. Late relapses do occur, and most regimen related mortality manifests early after autografting.

109

CLINICAL OUTCOMES WITH AND WITHOUT SARGRAMOSTIM (GM-CSF) POST AUTOLOGOUS PERIPHERAL BLOOD STEM CELL TRANSPLANTATION

Howle, E.L., Wolf, R.C., Burzynski, J.A., Gastineau, D.A., Lacy, M.Q., Gertz, M.A., Dispenzieri, A., Kumar, S., Dingli, D., Buadi, F., Inwards, D.J., Ansell, S.M., Micallef, I.N.M., Johnston, P.B., Porrata, L.F., Elliott, M.A., Hogan, W.J., Litzow, M.R. Mayo Clinic, Rochester, MN

Background: Colony stimulating factors (CSF) have substantial benefits when administered following autologous bone marrow transplant. With contemporary patient populations, conditioning regimens and supportive care, the value of CSF administration following autologous peripheral blood stem cell transplant (APBSCT) is less established. While CSF may slightly decrease time to neutrophil engraftment, the impact on hospitalization rate, infections and other clinical outcomes is not clear. On 4/1/08, a consensus-based practice change eliminated the routine use of CSF following APBSCT at Mayo Clinic Rochester based on the hypothesis that this would not significantly impact clinical outcomes.

Methods: Following IRB approval, a retrospective evaluation was conducted. All adult patients who received an APBSCT between 8/1/2007 and 8/31/2008 were reviewed. Patients were excluded if they refused consent for use of medical records for research, they received a prior transplant, their primary malignancy was amyloidosis or POEMS, or if they received filgrastim as prophylaxis following APBSCT. Baseline demographic characteristics and clinical endpoints were collected including: time to engraftment, number of transfusions, incidence of infection, fever and duration of therapeutic antimicrobials, incidence of engraftment syndrome, and duration of hospitalization and daily follow-up.

Results: Of 259 patients reviewed, 140 were included in the analysis (n = 66 in GM-CSF group, n = 74 in no CSF group). 119 patients were excluded: consent refused (n = 4), prior transplant (n = 28), amyloidosis (n = 38), POEMS (n = 10), filgrastim administered (n = 30). The majority of patients had a primary diagnosis of either multiple myeloma or non-Hodgkin lymphoma. Demographic data between groups was similar. Time to neutrophil engraftment was a median of 12 days in the GM-CSF group versus 14 days in the no CSF group (p<0.0001). Other major hematopoietic and infection-related clinical outcomes were not significantly different between groups.

Clinical Outcomes with and without Sargramostim (GM-CSF)

	GM-CSF	No CSF	p-value
Neutrophil engraftment in days (median; interquartile range)	12 (11–14)	14 (12.75–17)	<0.0001
Platelet engraftment in days (median; interquartile range)	13 (12–15)	14 (12.75–15)	0.39
Red blood cell transfusions (median; interquartile range)	3 (2–4)	3 (2–4)	0.82
Platelet transfusions (median; interquartile range)	3 (2–6)	4 (2–6)	0.21
Incidence of microbiologically documented infection (%)	21	32	0.14
Incidence of fever (%)	77	66	0.15
Incidence of engraftment syndrome (%)	3	5	0.49
Duration of therapeutic antimicrobials in days (median; interquartile range)	6 (1.75–8)	6 (0–8)	0.84
Duration of hospitalization in days (median; interquartile range)	2.5 (0–10)	4 (0–8)	0.66
Duration of daily follow-up in days (median; interquartile range)	18 (16–21)	19 (18–23)	0.0015

Conclusion: Preliminary analysis suggests that eliminating CSF following APBSCT modestly delays neutrophil engraftment but does not significantly impact other clinical outcomes. Analysis of lymphocyte recovery and day 100 mortality between groups is ongoing.